

### AMENDMENTS TO THE SPECIFICATION

**Please amend the paragraph at page 27, lines 4-11 as follows:**

Additional illustrative embodiments of the invention disclosed herein include 121P1F1 polypeptides comprising the amino acid residues of one or more of the biological motifs contained within a 121P1F1 polypeptide sequence set forth in Figure 2 or Figure 3. Various motifs are known in the art, and a protein can be evaluated for the presence of such motifs by a number of publicly available Internet sites (see, e.g., URL addresses: [pfam.wustl.edu/](http://pfam.wustl.edu/); [searchlauncher.bcm.tmc.edu/seq-search/struc-predict.html](http://searchlauncher.bcm.tmc.edu/seq-search/struc-predict.html); [psort.ims.u-tokyo.ac.jp/](http://psort.ims.u-tokyo.ac.jp/); world-wide-web[www.cbs.dtu.dk/](http://www.cbs.dtu.dk/); world-wide-web[www.ebi.ac.uk/interpro/scan.html](http://www.ebi.ac.uk/interpro/scan.html); world-wide-web[www.expasy.ch/tools/scnpsit1.html](http://www.expasy.ch/tools/scnpsit1.html); Epimatrix™ and Epimer™, Brown University, world-wide-web[www.brown.edu/Research/TB-HIV\\_Lab/epimatrix/epimatrix.html](http://www.brown.edu/Research/TB-HIV_Lab/epimatrix/epimatrix.html); and BIMAS, [bimas.dcrt.nih.gov/](http://bimas.dcrt.nih.gov/)).

**Please amend the paragraph at page 76, lines 34-35 as follows:**

121P1F1 maps to chromosome 4q, using 121P1F1 sequence and the NCBI BLAST tool: (world-wide-web[www.ncbi.nlm.nih.gov/genome/seq/page.cgi?F=HsBlast.html&&ORG=Hs](http://www.ncbi.nlm.nih.gov/genome/seq/page.cgi?F=HsBlast.html&&ORG=Hs)).

**Please replace the paragraphs (Table XXI) at page 196, line 1 to page 197, line 9 with the following paragraphs/table:**

A. TABLE XXI: Properties of 121P1F1

121P1F1	Bioinformatic Program	URL	Outcome
ORF	ORF finder		618 bp
Protein length			205 aa
Transmembrane region	TM Pred	<u>world-wide-web</u> <a href="http://www.ch.embnet.org/">www.ch.embnet.org/</a>	no TM
	HMMTop	<u>world-wide-web</u> <a href="http://www.enzim.hu/hmmtop/">www.enzim.hu/hmmtop/</a>	no TM, intracellular

	Sosui	<a href="http://world-wide-webwww.genome.ad.jp/SOSui/">world-wide-webwww.genome.ad.jp/SOSui/</a>	no TM, soluble protein
	TMHMM	<a href="http://world-wide-webwww.cbs.dtu.dk/services/TMHMM">world-wide-webwww.cbs.dtu.dk/services/TMHMM</a>	no TM
Signal Peptide	Signal P	<a href="http://world-wide-webwww.cbs.dtu.dk/services/SignalP/">world-wide-webwww.cbs.dtu.dk/services/SignalP/</a>	none
pI	pI/MW tool	<a href="http://world-wide-webwww.expasy.ch/tools/">world-wide-webwww.expasy.ch/tools/</a>	8.28
Molecular weight	pI/MW tool	<a href="http://world-wide-webwww.expasy.ch/tools/">world-wide-webwww.expasy.ch/tools/</a>	23.7 kDa
Localization	PSORT	<a href="http://psort.nibb.ac.jp/">psort.nibb.ac.jp/</a>	30% nuclear, 10% mitochondrial
	PSORT II	<a href="http://psort.nibb.ac.jp/">psort.nibb.ac.jp/</a>	65% nuclear, 17% cytoplasmic
Motifs	Pfam	<a href="http://world-wide-webwww.sanger.ac.uk/Pfam/">world-wide-webwww.sanger.ac.uk/Pfam/</a>	Basic Zipper motif, Myc leucine zipper
	Prints	<a href="http://world-wide-webwww.biochem.ucl.ac.uk/">world-wide-webwww.biochem.ucl.ac.uk/</a>	Steroid hormone receptor signature
	Blocks	<a href="http://world-wide-webwww.blocks.fhcrc.org/">world-wide-webwww.blocks.fhcrc.org/</a>	no significant motif
Variant 1A	Bioinformatic Program	URL	Outcome
ORF	ORF finder		618 bp
Protein length			126 aa
Transmembrane region	TM Pred	<a href="http://world-wide-webwww.ch.embnet.org/">world-wide-webwww.ch.embnet.org/</a>	no TM
	HMMTop	<a href="http://world-wide-webwww.enzim.hu/hmmtop/">world-wide-webwww.enzim.hu/hmmtop/</a>	no TM, extracellular
	Sosui	<a href="http://world-wide-webwww.genome.ad.jp/SOSui/">world-wide-webwww.genome.ad.jp/SOSui/</a>	no TM, soluble protein
	TMHMM	<a href="http://world-wide-webwww.cbs.dtu.dk/services/TMHMM">world-wide-webwww.cbs.dtu.dk/services/TMHMM</a>	no TM
Signal Peptide	Signal P	<a href="http://world-wide-webwww.cbs.dtu.dk/services/SignalP/">world-wide-webwww.cbs.dtu.dk/services/SignalP/</a>	none
pI	pI/MW tool	<a href="http://world-wide-webwww.expasy.ch/tools/">world-wide-webwww.expasy.ch/tools/</a>	8.65
Molecular weight	pI/MW tool	<a href="http://world-wide-webwww.expasy.ch/tools/">world-wide-webwww.expasy.ch/tools/</a>	14.3 kDa
Localization	PSORT	<a href="http://psort.nibb.ac.jp/">psort.nibb.ac.jp/</a>	30% nuclear, 11% peroxisome
	PSORT II	<a href="http://psort.nibb.ac.jp/">psort.nibb.ac.jp/</a>	30% nuclear, 52.2% cytoplasmic
Motifs	Pfam	<a href="http://world-wide-webwww.sanger.ac.uk/Pfam/">world-wide-webwww.sanger.ac.uk/Pfam/</a>	no significant motif
	Prints	<a href="http://world-wide-webwww.biochem.ucl.ac.uk/">world-wide-webwww.biochem.ucl.ac.uk/</a>	no significant motif
	Blocks	<a href="http://world-wide-webwww.blocks.fhcrc.org/">world-wide-webwww.blocks.fhcrc.org/</a>	no significant motif
Variant 4	Bioinformatic Program	URL	Outcome
ORF	ORF finder		618 bp
Protein length			190 aa
Transmembrane region	TM Pred	<a href="http://world-wide-webwww.ch.embnet.org/">world-wide-webwww.ch.embnet.org/</a>	no TM
	HMMTop	<a href="http://world-wide-webwww.enzim.hu/hmmtop/">world-wide-webwww.enzim.hu/hmmtop/</a>	no TM, intracellular
	Sosui	<a href="http://world-wide-webwww.genome.ad.jp/SOSui/">world-wide-webwww.genome.ad.jp/SOSui/</a>	no TM, soluble protein
	TMHMM	<a href="http://world-wide-webwww.cbs.dtu.dk/services/TMHMM">world-wide-webwww.cbs.dtu.dk/services/TMHMM</a>	no TM
Signal Peptide	Signal P	<a href="http://world-wide-webwww.cbs.dtu.dk/services/SignalP/">world-wide-webwww.cbs.dtu.dk/services/SignalP/</a>	none
pI	pI/MW tool	<a href="http://world-wide-webwww.expasy.ch/tools/">world-wide-webwww.expasy.ch/tools/</a>	6.05
Molecular weight	pI/MW tool	<a href="http://world-wide-webwww.expasy.ch/tools/">world-wide-webwww.expasy.ch/tools/</a>	22.02 kDa

Localization	PSORT	<a href="http://psort.nibb.ac.jp/">psort.nibb.ac.jp/</a>	30% nuclear, 10% mitochondrial matrix space, 10% lysosome
	PSORT II	<a href="http://psort.nibb.ac.jp/">psort.nibb.ac.jp/</a>	65.2% nuclear, 21.7% mitochondrial, 13% cytoplasmic
Motifs	Pfam	<a href="http://world-wide-webwww.sanger.ac.uk/Pfam/">world-wide-webwww.sanger.ac.uk/Pfam/</a>	bZip transcription factor Myc leucine zipper
	Prints	<a href="http://world-wide-webwww.biochem.ucl.ac.uk/">world-wide-webwww.biochem.ucl.ac.uk/</a>	steroid hormone receptor signature
	Blocks	<a href="http://world-wide-webwww.blocks.fhcrc.org/">world-wide-webwww.blocks.fhcrc.org/</a>	no significant motif

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**AMENDMENTS TO THE CLAIMS**

This listing of claims will replace all prior versions, and listings, of claims in the application:

- 1-3. (canceled)
4. (currently amended): An isolated monoclonal antibody or fragment thereof that specifically binds to SEQ ID NO: 3 [[.]], wherein said antibody is raised against a fragment of SEQ ID NO: 3 comprising at least 5 amino acids of a peptide selected from amino acid residues 1-67 of SEQ ID NO: 3, amino acid residues 78-169 of SEQ ID NO: 3, amino acid residues 178-205 of SEQ ID NO: 3, amino acid residues 1-22 of SEQ ID NO: 3, amino acid residues 117-142 of SEQ ID NO: 3, amino acid residues 21-57 of SEQ ID NO: 3, amino acid residues 76-113 of SEQ ID NO: 3, and amino acid residues 120-149 of SEQ ID NO: 3.
5. (canceled)
6. (currently amended): The antibody or fragment thereof of claim 5 4, wherein the monoclonal antibody is recombinantly produced.
7. (previously presented): The antibody or fragment thereof of claim 4, which is conjugated to an agent.
8. (canceled)
9. (previously presented): The antibody or fragment thereof of claim 4, wherein the fragment is an Fab, F(ab')<sub>2</sub>, Fv or sFv fragment.
10. (previously presented): The antibody or fragment thereof of claim 4, which is a human antibody, a humanized antibody or a chimeric antibody.
11. (canceled)

12. (currently amended): A hybridoma that produces an antibody ~~that specifically binds to a protein comprising SEQ ID NO: 3.~~ of claim 4.

13. (previously presented): The antibody or fragment thereof of claim 6, wherein the monoclonal antibody is a single chain monoclonal antibody that immunospecifically binds to a protein comprising SEQ ID NO: 3.

14. (canceled)

15. (withdrawn): A method of delivering an agent to a cell that expresses 121P1F1 (SEQ ID NO: 3), said method comprising:

providing the agent conjugated to an antibody or fragment thereof of claim 4; and,  
exposing the cell to the antibody-agent or fragment-agent conjugate.

16-47. (canceled)

48. (withdrawn): A method of inhibiting growth of cancer cells that express 121P1F1, comprising:

administering to said cells an antibody or fragment thereof which specifically bind to a 121P1F1 protein (SEQ ID NO: 3).

49. (withdrawn): The method of claim 48 wherein the antibody or fragment thereof is a single chain monoclonal antibody that immunospecifically binds to the 121P1F1 protein.

50-53. (canceled)

54. (withdrawn): The method of claim 48 of inhibiting growth of cancer cells that express 121P1F1 and a particular HLA molecule, the method comprising steps of:

administering to said cells human T cells, wherein said T cells specifically recognize an 121P1F1 peptide sequence in the context of the particular HLA molecule.

55-77. (canceled)

78. (previously presented): The antibody or fragment thereof of claim 7, wherein the agent is a diagnostic agent or a cytotoxic agent.

79. (previously presented): The antibody or fragment thereof of claim 78, wherein the cytotoxic agent is selected from the group consisting of radioactive isotopes, chemotherapeutic agents and toxins.

80. (previously presented): The antibody or fragment thereof of claim 79, wherein the radioactive isotope is selected from the group consisting of  $^{211}\text{At}$ ,  $^{131}\text{I}$ ,  $^{125}\text{I}$ ,  $^{90}\text{Y}$ ,  $^{186}\text{Re}$ ,  $^{188}\text{Re}$ ,  $^{153}\text{Sm}$ ,  $^{212}\text{Bi}$ ,  $^{32}\text{P}$  and radioactive isotopes of Lu.

81. (previously presented): The antibody or fragment thereof of claim 79, wherein the chemotherapeutic agent is selected from the group consisting of taxol, actinomycin, mitomycin, etoposide, tenoposide, vincristine, vinblastine, colchicine, gelonin, and calicheamicin.

82. (previously presented): The antibody or fragment thereof of claim 79, wherein the toxin is selected from the group consisting of diphtheria toxin, enomycin, phenomycin, Pseudomonas exotoxin (PE) A, PE40, abrin, abrin A chain, mitogellin, modeccin A chain, and alpha-sarcin.